

REMARKS

This amendment is submitted in response to the Office Action mailed on December 29, 2006 in which claims 1-20 were rejected. With this Amendment, claims 1, 8, 14, and 20 are amended. Accordingly, claims 1-20 are presented for reconsideration and allowance.

I. Response to Claim Objections

In the Office Action, claim 1 was object to for ending with a semicolon rather than a period. Claim 1 is accordingly amended to correct this typographical error.

II. Response to Obviousness Rejections of Claims 1-20

Claims 1-6, 8-12, 14-18, and 20 were rejected under 35 U.S.C. § 103(a) as being obvious over Penn, U.S. Patent No. 5,260,009 ("the Penn patent") in view of Gore, U.S. Patent No. 5,257,657 ("the Gore patent"). Claims 7 and 13 were rejected under 35 U.S.C. § 103(a) as being obvious over the Penn patent in view of the Gore patent, and further in view of Reiss, U.S. Patent No. 5,581,994 ("the Reiss patent") and Beeston, U.S. Patent No. 3,472,452 ("the Beeston patent"). Claim 19 was rejected under 35 U.S.C. § 103(a) as being obvious over the Penn patent in view of the Gore patent, and further in view of Caugherty, U.S. Patent No. 2,117,651 ("the Caugherty patent").

As amended, independent claims 1, 8, and 14 each require the use of at least a first deformable thermal insulator and a second deformable thermal insulator that form a portion of a ceiling of the build chamber. As discussed in the present application, a dispensing head (e.g., extrusion head 142) is supported on top of oven 12 with the use of x-y gantry 18, thereby allowing the dispensing head to deposit a modeling material onto platform 16 within build chamber 24 (A). The ceiling of build chamber 24 is formed in part with at least a first deformable thermal insulator (e.g., at least one of x-baffles 132) and a second deformable thermal insulator (e.g., at least one of y-baffles 136) (B, fig). Accordingly, a build operation performed pursuant to the present invention includes compressing or expanding the first

deformable thermal insulator when the dispensing head is moved in a first direction (e.g., in a direction along the x-axis), and compressing or expanding the second deformable thermal insulator when the dispensing head is moved in a second direction that is orthogonal to the first direction (e.g., in a direction along the y-axis) (C).

In contrast, the Penn patent does not disclose or suggest the use of a first deformable thermal insulator and a second deformable thermal insulator that form a portion of a ceiling of a build chamber, as required by claims 1, 8, and 14. As shown in FIG. 1a of the Penn patent, the compressible sheaths of positioning devices 45 do not form a portion of a ceiling of a build chamber. Furthermore, while the embodiment disclosed in FIGS. 2a-2c may include an environmentally-controlled chamber (the Penn patent, col. 7, lines 48-55), the Penn patent does not disclose or suggest that a portion of a ceiling of the environmentally-controlled chamber is formed by deformable thermal insulators.

Similarly, the Gore patent does not disclose or suggest the use of a first deformable thermal insulator and a second deformable thermal insulator that form a portion of a ceiling of a build chamber, as required by claims 1, 8, and 14. The Gore patent only discloses the use of an enclosure that provides a controllable environment (the Gore patent, col. 3, lines 44-49; and col. 5, lines 55-59). As such, claims 1, 8, and 14 are not obvious over the Penn patent or the Gore patent, taken alone or together.

Claims 2-7, 9-13, and 15-20 depend from claims 1, 8, and 14, respectively, and are allowable therewith. In addition, it is respectfully submitted that the combinations of features recited in claims 2-7, 9-13, and 15-20 are independently patentable, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. 2143.03, citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988).


CONCLUSION

Because the prior art made of record does not show, suggest, or teach all the limitations in claims 1-20, pending claims 1-20 are in condition for allowance. Favorable reconsideration and allowance of this application are respectfully requested.

Respectfully submitted,

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